

# REPORT DOCUMENTATION PAGE

|  |                       |  |            |
|--|-----------------------|--|------------|
| <b>1. Report Security Classification:</b> UNCLASSIFIED   |                       |  |            |
| <b>2. Security Classification Authority:</b>   |                       |  |            |
| <b>3. Declassification/Downgrading Schedule:</b>   |                       |  |            |
| <b>4. Distribution/Availability of Report:</b> DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.   |                       |  |            |
| <b>5. Name of Performing Organization:</b><br>JOINT MILITARY OPERATIONS DEPARTMENT   |                       |  |            |
| <b>6. Office Symbol:</b><br>C  |                       | <b>7. Address:</b> NAVAL WAR COLLEGE<br>686 CUSHING ROAD<br>NEWPORT, RI 02841-1207 |            |
| <b>8. Title</b> (Include Security Classification):<br>INFORMATION OPERATIONS AND J-3: A PERFECT UNION  |                       |  |            |
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| <b>10. Type of Report:</b> FINAL   |                       | <b>11. Date of Report:</b> 9 February 2004   |            |
| <b>12. Page Count:</b> 30 <b>12A Paper Advisor (if any):</b> Lt Col Derrill T. Goldizen, USAF  |                       |  |            |
| <b>13. Supplementary Notation:</b> A paper submitted to the Faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.  |                       |  |            |
| <b>14. Ten key words that relate to your paper:</b><br>Information Operations, Joint Task Force, JFIOCC, JIOTF, JPOTF, IO Cell   |                       |  |            |
| <b>15. Abstract:</b><br><p>Information Operations (IO) during Operation Allied Force proved to be a failure. Since then, former IO planners and military war college students have focused on a lack of unity of command and unity of effort as primary catalysts for this failure. They proposed eliminating the IO cell concept and adopting either an IO task force or a specific IO functional component command. I disagree.</p> <p>Currently, we are experiencing an explosion of change within the IO community. Not only is the utility of IO being embraced among the different services, but also for the first time we have a unified command, U.S Strategic Command, chartered with the responsibility of organizing and coordinating national-level IO for the regional combatant commands. These changes, along with painful lessons learned, debunk the notional IO task force and component concepts.</p> <p>The nature of IO is often misunderstood. IO is a strategy instead of a force. Thus, the IO organization under the Joint Task Force (JTF) J-3 offers the most effective way to integrate IO into the overall military plan. To plan and execute IO early, the combatant commander should stand up an Operational Planning Team (comprised of theater-specific IO planners from the combatant command as well as support organizations) until a JTF is activated. The JTF should initially concentrate on shaping the battlespace through IO until sufficient forces are in theater. Finally, joint IO doctrine fails to address how the IO cell should be internally organized. Properly manned disciplines within the different functions of influence operations, physical attack operations, network operations, and support will allow the JFC to execute a timely, deconflicted, and synergistic IO combat plan</p> |                       |  |            |
| <b>16. Distribution / Availability of Abstract:</b>  | Unclassified<br><br>X | Same As Rpt  | DTIC Users |
| <b>17. Abstract Security Classification:</b> UNCLASSIFIED  |                       |  |            |
| <b>18. Name of Responsible Individual:</b> CHAIRMAN, JOINT MILITARY OPERATIONS DEPARTMENT  |                       |  |            |
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Security Classification of This Page Unclassified

NAVAL WAR COLLEGE  
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INFORMATION OPERATIONS AND J-3 – A PERFECT UNION

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature:\_\_\_\_\_

9 February 2004

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## Abstract

### INFORMATION OPERATIONS AND J-3 – A PERFECT UNION

Information Operations (IO) during Operation Allied Force proved to be a failure. Since then, former IO planners and military war college students have focused on a lack of unity of command and unity of effort as primary catalysts for this failure. They proposed eliminating the IO cell concept and adopting either an IO task force or a specific IO functional component command. I disagree.

Currently, we are experiencing an explosion of change within the IO community. Not only is the utility of IO being embraced among the different services, but also for the first time we have a unified command, U.S Strategic Command, chartered with the responsibility of organizing and coordinating national-level IO for the regional combatant commands. These changes, along with painful lessons learned, debunk the notional IO task force and component concepts.

The nature of IO is often misunderstood. IO is a strategy instead of a force. Thus, the IO organization under the Joint Task Force (JTF) J-3 offers the most effective way to integrate IO into the overall military plan. To plan and execute IO early, the combatant commander should stand up an Operational Planning Team (comprised of theater-specific IO planners from the combatant command as well as support organizations) until a JTF is activated. The JTF should initially concentrate on shaping the battlespace through IO until sufficient forces are in theater. Finally, joint IO doctrine fails to address how the IO cell should be internally organized. Properly manned disciplines within the different functions of influence operations, physical attack operations, network operations, and support will allow the JFC to execute a timely, deconflicted, and synergistic IO combat plan.

## INTRODUCTION

*“Those skilled in war subdue the enemy’s army without battle.”*

*Sun Tzu*

Even though the art of Information Operations (IO) is not new, the formalization of IO continues to evolve. Sun Tzu was one of the earliest to realize the importance of information and how to use it to your advantage. The last few military conflicts have shown a progressive improvement with the way the U.S. military has incorporated IO into the military plan. Through IO, new target sets emerge, new weapons become available, and the opportunity to directly influence adversarial decision-making becomes a reality. However, with such a potential military advantage, it is a wonder why we continue to struggle with how to organize IO.

Operation Allied Force (OAF) revealed the shortcomings of the doctrinal “IO cell” organization within the Joint Task Force (JTF) construct – lack of unity of command, lack of unity of effort, and lack of responsiveness.<sup>1</sup> To solve these problems, many former IO planners and military war college students have suggested such concepts as the Joint Information Operations Task Force (JIOTF) and the Joint Force Information Operations Component Commander (JFIOCC).<sup>2</sup> I disagree with their proposals since IO is a strategy, not a force. The IO organization should remain under the JTF’s J-3 (operations) to allow for the proper integration and synchronization of IO strategy into the overall military plan. In addition, joint and individual service IO agencies have recently improved their support to operational commanders thereby removing a major justification for the JFIOCC and JIOTF concepts – joint/service IO organizations’ lack of unity of effort and lack of responsiveness to the needs of the field. Though I agree the doctrinal “IO cell” structure is currently inadequate, its effectiveness can be improved by reorganizing its internal structure by

functions. Improving the relationships between the JTF IO organization and other IO agencies by reorganizing the internal structure of the JTF IO organization (while still under J-3) offer the best way to meet the Joint Force Commander's (JFC) operational objectives.

## **CURRENT IO ORGANIZATIONS**

*"Now, for the first time, information operations are going to be assigned to somebody. They've never been under a unified command before."*<sup>3</sup>

*Admiral Ellis*

*Commander, USSTRATCOM*

Within the last 10 years, IO has gained momentum. In 1995, General Ronald R. Fogleman, then Air Force Chief of Staff, described IO as the fifth dimension of warfare.<sup>4</sup> Since then, IO has evolved to become a key component of a joint vision that sets the stage for military operations in the 21<sup>st</sup> century. This joint vision states that IO are essential to achieving full spectrum dominance.<sup>5</sup> To be effective, services and the IO community need to maintain appropriately designed IO organizations.<sup>6</sup>

To begin, it is important to understand what constitutes IO. Joint Publication (JP) 3-13, *Joint Doctrine for Information Operations*, defines IO as "actions taken to affect adversary information and information systems while defending one's own information and information systems."<sup>7</sup> IO applies across the full spectrum of military operations, beginning during peacetime and progressing through crisis, conflict, and the return to peace. Over the years, IO capabilities have traditionally included psychological operations (PSYOP), operations security (OPSEC), electronic warfare (EW), physical attack (in support of IO), and military deception (MILDEC). Recently, computer network operations (CNO), comprised of computer network attack (CNA) and computer network defense (CND), have

been added as well. As one can see, one set of IO capabilities – PSYOP and MILDEC - focuses on the perceptions and attitudes of decision-makers or groups. A second set of IO capabilities – EW, OPSEC, physical attack, and CNO - focuses on attacking enemy or defending friendly use of the electromagnetic spectrum, information systems, and information that supports decision makers, command and control (C2), and automated responses. Public affairs (PA) and civil affairs (CA) represent related activities, which like IO, can contribute to achieving a commander’s overall objectives in shaping the information environment. See Appendix A for complete definitions of each IO capability.

JP 5-00.2, *Joint Task Force Planning Guidance and Procedures*, lists unity of effort, unity of command, centralized planning, and common doctrine as essential elements of a sound organization.<sup>8</sup> However, the organization must also be responsive in order to seize the initiative from the enemy. JP 3-13 states: “IO planning must begin at the earliest stage of a [Joint Force Commander’s] campaign or operational planning.”<sup>9</sup> The IO effort during OAF violated these principles. However, IO organizational changes since OAF (described below) have actually improved the support provided to combatant commanders and resolved the unity of effort, unity of command, and responsiveness problems identified from OAF, eliminating much of the justification for the JFIOCC and JIOTF organizational concepts.

**United States Strategic Command (USSTRATCOM)** – Recently the Unified Command Plan was updated to reflect the creation of a new Joint Force Headquarters for IO (JFHQ-IO) under USSTRATCOM.<sup>10</sup> Admiral Ellis, Commander, USSTRATCOM, said during the assumption of command ceremony, “Now, for the first time, information operations are going to be assigned to somebody. They’ve never been under a unified command before.”<sup>11</sup> This new headquarters is charged with integrating and coordinating

Department of Defense (DoD) IO efforts that cross combatant commander geographic areas of responsibility or core IO capabilities.<sup>12</sup>

According to the USSTRATCOM concept of operations, the JFHQ-IO will conduct planning, coordination, integration, and synchronization of IO that have trans-regional effects or that directly support national objectives. This will include efforts to integrate combatant commander IO activities across the globe. To properly execute these actions, regional combatant commanders will need to be transparent in their IO planning efforts so that the JFHQ-IO can assure IO actions in one combatant commander's area of responsibility (AOR) will not conflict with national efforts or those of other combatant commanders.<sup>13</sup> According to General Richard Myers, Chairman of the Joint Chiefs of Staff, the value added to the regional combatant commands will be an improved integration of efforts that have previously tended to be 'stove-piped' in different organizations (e.g., C2 warfare, PSYOP, EW, CNA).<sup>14</sup> For the first time, organizing IO functionally at the unified command level will capitalize on three long-held military principles of war – unity of command, mass, and economy of force.<sup>15</sup> While the JFHQ-IO concentrates on strategic IO policy and force structure, the Joint Information Operations Center (JIOC) works at the operational level.

**JIOC** – The JIOC's mission is to plan, integrate, and synchronize comprehensive IO in support of JFC and national level objectives. The JIOC strives to be the DoD's acknowledged "Center of Excellence" for integrating IO into military plans and operations across the spectrum of conflict. On 1 October 2002, the JIOC was realigned as a subordinate command to USSTRATCOM. The Commander of the JIOC is a nominative position that has always been filled by an Air Force General, who is tri-hatted as the Deputy Commander for IO, Eighth Air Force (8 AF) and Commander, Air Intelligence Agency (AIA).<sup>16</sup> It is the

JIOC that provides unity of effort and continuity within the IO community at the operational level. Regionally-oriented, full-spectrum IO planning augmentation cells (one per regional combatant command) from the JIOC will be among the first to deploy and help establish the IO organization within a JTF. To provide a more operational/tactical perspective of IO, each service organizes IO to ultimately support component commanders.

**Air Force** – Air Combat Command (ACC) is the headquarters element for Air Force IO. The Air Force has been actively incorporating IO into its operations through the Air Operations Center (AOC). A recently published Program Action Directive (PAD 02-04), *Air Combat Command Information Operations Integration*, realigned ACC C2 and IO forces under 8 AF resulting in the establishment of 8 AF as ACC’s “IO Numbered Air Force.”<sup>17</sup> This “Total Force Initiative” provides combatant commanders with unprecedented, comprehensive access to the full spectrum of the Air Force’s IO might. When IO is fully integrated with other warfighting capabilities, the JFC, through the Joint Force Air Component Commander (JFACC) (as AOC commander), will have a more robust and powerful arsenal to achieve warfighting objectives.

The 67<sup>th</sup> Information Warfare Wing under 8 AF is the provider of training personnel via Information Warfare Flights. AIA under ACC is the IO intelligence provider and plays a significant role in training and development of Air Force IO capabilities. The Air Force Information Warfare Center under AIA provides IO technical training and intelligence support to the Air Force.

**Army** - Space and Missile Defense Command (SMDC) is the Army’s IO component to USSTRATCOM. Army Strategic Command (ARSTRAT) is the IO planning and integration headquarters for SMDC. The 1<sup>st</sup> Information Operations Command (Land) is the

operational element for ARSTRAT and provides support to land component and Army commands to facilitate planning and execution of IO.<sup>18</sup> The central focus for IO at the corps level and below is the information operations coordinator (IOCOORD). The IOCOORD is a special staff officer who is responsible for IO unity of effort on the corps staff.<sup>19</sup> In addition, the army has established a Functional Area 30 for the Army's IO career field. This will ensure the military has IO specialists desperately needed for future IO.<sup>20</sup>

**Marine Corps** – The Marine Corps does not conduct centralized control of IO; however, Marine Forces-Integrated Network Operations is responsible for the protection and defense of Marine Corps computer networks.

**Navy** – Naval Network Warfare Command (NAVNETWARCOM) is the headquarters element for Navy IO. Under NAVNETWARCOM is the Fleet Information Warfare Center (FIWC), providing a “Center of Excellence” for Navy IO. The FIWC provides naval and joint commanders with deliberate and crisis action IO planning support, ranging from strategic-level planning through tactical execution.<sup>21</sup>

While each service can provide IO expertise to a combatant commander's J-39 (IO) staff, the basic organizational entity to coordinate IO within each combatant commander's geographic AOR is the IO cell.

**IO Cell** –JP 3-13 states that it is the JFC's responsibility to organize, plan, and coordinate IO according to the unique mission requirements; IO planning and coordination is conducted through the IO cell.<sup>22</sup> Appendix B shows a graphical representation of the IO cell.<sup>23</sup> According to doctrine, the JFC usually assigns IO responsibility to the J-3 who in turn designates an IO officer to “supervise” the IO cell and “coordinate” IO activities.<sup>24</sup>

During OAF, IO was organized in accordance with JP 3-13. Unfortunately, the North Atlantic Treaty Organization's (NATO) IO effort during OAF was judged to be a failure.<sup>25</sup> Even though the IO cell organization was not the primary cause, it was considered a contributing factor. Capt John Shaw, member of the IO cell during OAF, sums up the limited utility of the IO cell concept when he states, "with each player in the IO cell working for a different boss, the IO cell is really nothing more than a round table for discussion and deconfliction."<sup>26</sup> Doctrinally, the IO cell functions as a forum for coordination and idea exchange rather than a body empowered to develop an overriding IO campaign. Though there is utility with this IO cell organization, it is better suited for an Information Operations Working Group (IOWG). The IO cell should be structured (by IO functions) in order to centralize IO planning.

Lack of timeliness with activating the IO cell was also a reason for failure of IO during OAF. Compared to the Joint Psychological Operations Task Force (JPOTF), which stood up prior to OAF, the IO cell stood up when the JTF was established. This complicated the coordination and execution of IO operations.<sup>27</sup> In contrast, within 36 hours after the September 11, 2001 attacks, the United States Central Command (USCENTCOM) IO cell was stood up with approximately 20 folks from the JIOC augmenting its J-3PI (IO) staff.<sup>28</sup> Relationships between the regional IO experts at the JIOC and the regional combatant commanders allow the JIOC support teams to be involved in the JFC's planning from the early stages of crisis (crisis action planning) through execution.

Another key reason for the lackluster performance of IO was a distinct lack of IO authority at the operational level (this lack of apparent command authority during OAF prompted some to advocate elevating IO within the JTF staff in order to better compete for

limited resources).<sup>29</sup> The JTF IO planning cell in OAF was lead by a Navy Lieutenant Commander (O4). In contrast, today's joint force IO cells are typically led by a Colonel or Navy Captain (O6). In fact, United States Pacific Command (USPACOM) and USCENTCOM both have a Brigadier General (O7) as the combatant command's IO director, which apparently has worked well.<sup>30</sup>

**Joint Information Operations Task Force (JIOTF) and the Joint Force Information Operations Component Commander (JFIOCC)** – To provide unity of command and unity of effort, several former IO planners and military war college students have identified the necessity for a single point of contact with requisite command authority for IO at the JTF level.<sup>31</sup> JP 0-2, *Unified Action Armed Forces*, notes that JFCs “can establish functional component commands to conduct operations and has the authority to organize forces to best accomplish the assigned mission based on the concept of operations.”<sup>32</sup> This statement forms the foundation of two proposed solutions to the unity of command/unity of effort problem -- the JIOTF and JFIOCC.

Capt John Shaw's solution (after his OAF experience) is to create a JIOTF modeled after the JPOTF. Since JP 3-53, *Doctrine for Joint Psychological Operations*, calls for the creation of a JPOTF whenever “significant PSYOP forces are required to accomplish the JFC PSYOP objectives,”<sup>33</sup> then a JIOTF should be created whenever significant IO is required. Shaw states that a JIOTF will function more effectively than an IO cell because it can provide unity of effort by placing authority and responsibility for IO planning and operations under one person (the definition of unity of command).<sup>34</sup> For the sole purpose of exercising the JIOTF concept, the United States Southern Command (USSOUTHCOM) conducted STEEL PUMA 2000.<sup>35</sup> This exercise revealed that as the JIOTF formed, it took on the

appearance of a normal JTF structure, requiring the same administrative, communications, and logistical support as a doctrinal JTF (a serious drawback). This contributed to confusion regarding responsibilities and C2 relationships. However, USSOUTHCOM recommended further examination of the JIOTF concept. After STEEL PUMA (in December 2000), United States European Command (USEUCOM) designed an exercise to assess the JTF's IO plan (with a JIOTF). USEUCOM observed that the JIOTF maintained IO in a separate stove-pipe structure, which made integration more difficult.<sup>36</sup>

Another proposed solution combines the IO cell (from J-3) with the JPOTF. Since PSYOP is part of IO, why not make the JPOTF the de facto JIOTF, especially early in a crisis? This combination of expertise would create a streamlined structure enabling expeditious PSYOP message approval by the JFC without the additional logistical burden of a separate JIOTF.<sup>37</sup> However, what is misunderstood is the nature of IO. Like air power, IO is a strategy. Like an Air and Space Expeditionary Task Force (AETF), the JPOTF is a force; putting the IO cell in the JPOTF would make no more sense than putting the AETF in the AOC. Combining the planners and the thinkers with the shooters risks the elimination of decentralized execution.<sup>38</sup> Separating the shooters from the planners/decision makers allows for greater flexibility and responsiveness at the tactical level.

The JIOTF and JFIOCC concepts are based on a single theory – to improve unity of command/unity of effort, an IO officer (in whatever capacity) must report directly to the JFC instead of the J-3. However, task forces and component commanders usually have command authority over assigned forces. If a JIOTF or JFIOCC were to form, essential forces and expertise would need to be stripped away from the other components or the services – an unlikely scenario. Thus, where the theory falls apart for a JIOTF and JFIOCC concept is

command and control of required forces/assets. As long as forces/assets remain within the services or other components of the joint force, IO is nothing more than a philosophy/strategy/force enabler employed by those who have assets. Drawing a parallel from World War II, when the allied strategic bombing effort shifted to attacking the enemy's logistics function (e.g. ball bearing factories), a logistics component commander was NOT created. The component commander with the training/procedures/equipment that could best execute, the Army Air Corps, assumed the mission. But why wouldn't you want to put "IO forces" under an IO command structure?

Assigning IO forces under an IO command structure might improve unity of effort within IO, but such "stove-piping" only serves to increase the higher commander's span of control and may lead to an IO strategy decoupled from the higher commander's overarching strategy, since his J-3 has less immediate visibility on exactly what IO is doing. Major Jeffrey D. Seinwill (former Air Command and Staff College student) presents several thoughts to support the claim that IO is a force enabler that should be integrated rather than isolated.<sup>39</sup> He highlights a potential conflict when two joint force components attempt to utilize the same asset. For example, suppose the JFC chooses to use air forces to destroy a vital enemy C2 node that is hardened and heavily defended against air attack (an IO mission). Major Seinwill suggests that a JFIOCC would have operational control (OPCON) of any EW aircraft (e.g. EA-6B, EC-130, or RC-135), but the JFACC would exercise OPCON over the strike and refueling platforms. Should OPCON (or tactical control) depend upon whether the target is an "information" target? Major Seinwill's scenario requires that air platforms will be reassigned from the JFACC to the JFIOCC based on the target – this is not practical and

otherwise raises concerns that confusion will hinder or even delay a critical synergistic attack. This is evidence of stove-piping IO and a reason not to create a JFIOCC.

The Air Staff argues that the perceived need to reinforce unity of command may unnecessarily complicate C2, reduce functional component effectiveness, and fragment Joint Operations Area (JOA)-wide capabilities.<sup>40</sup> For example, within a typical joint force organization are directorates containing specialty cells, some of which evolve to take on a life of their own. Having an information superiority coordinator within J-2 does not pose a problem. However, when the coordinator role evolves to become a component under the JFC, as has been proposed and exercised by the U.S. Navy under their network centric operations concept, it creates some overlap with and friction between other component commanders, in terms of responsibility for collection, information sharing and the like.<sup>41</sup> The same is true when an IO cell under J-3 morphs into a JFIOCC. As these stove-piped commands proliferate, the end result is that the asset-owning functional component commanders are relegated to being little more than force schedulers. So what is the solution to this organizational dilemma?

## RECOMMENDATIONS

*“We’ve been blessed so far – and I will knock on wood again – that we haven’t been the victim of major cyber attacks during this terror campaign, but we know that that is something enemies will go after, particularly as they see us making increasingly effective use off our own information systems. We’ve got to be able to defend ours, and we need to be able to attack our enemy’s.”*

*Deputy Secretary of Defense Paul Wolfowitz<sup>42</sup>*

During Operation Iraqi Freedom (OIF), IO was integrated into the military plan resulting in an important lesson learned: “IO can shorten military campaigns and save

lives.”<sup>43</sup> However, according to Admiral Giambastiani, Commander of U.S. Joint Forces Command, even though IO demonstrated considerable effectiveness during OIF, IO still needs enhancement.<sup>44</sup> Therefore, I propose three recommendations to improve the integration of IO into military plans. As previously discussed, the proposed JFIOCC and JIOTF concepts have serious flaws. IO planning should remain under J-3. To improve the initial responsiveness of IO, the combatant commander should consider activating an IO Operational Planning Team (OPT) during the pre-crisis phase of conflict. And finally, since JP 3-13 fails to provide an internal structure for IO planning and execution, I recommend creating functional teams within the IO cell.

***Retain the IO cell under J-3*** – The arguments in the preceding section debunk the idea that IO should be organized into a task force or as a separate joint force functional component. The organizational improvements within the IO community now enhance unity of command and unity of effort. Since the J-3 usually assigns tasks to subordinate task forces and components, the IO cell *under J-3* is best situated to integrate IO into the JFC’s military plan. Today’s IO experts soundly believe that the IO organization (under J-3) can steer campaigns, prepare battlegrounds, and assess results by using current component commander’s assets.<sup>45</sup> The evidence is OIF. OIF employed the IO cell concept, and even though the official lessons learned have not yet been published, the IO planners seemed to pull everything together in order to execute a sound IO strategy (see Appendix C for a breakdown of the IO effort). Absence of major conflict, refugees, or catastrophic environmental damage due to blown oil wells suggests that IO worked; however, a complete assessment of its impact has been difficult to attain.

**Create IO OPTs** – A prerequisite for achieving information dominance is to seize the initiative and react swiftly to any information the adversary might try to use to influence public opinion at home and abroad.<sup>46</sup> The question remains, how do you create an IO organization that can conduct IO in the run-up to a crisis *before* a JTF stands up? After all, the goal of IO is to forestall a crisis and prevent escalation to armed conflict.

USEUCOM's December 2000 exercise to assess a JTF's IO plan highlighted the lack of responsiveness required to properly initiate the IO plan.<sup>47</sup> Usually, deployment and execution orders are not issued until crisis is well underway, leaving IO planners in a pre-crisis period without authority to call upon resources or support. Lt Col Paul Bowman, USEUCOM J-39, suggests initiating a JIOTF to act as an independent task force to plan, coordinate, and execute the IO shaping portion of the plan prior to full JTF activation.<sup>48</sup> However, the logistical constraints associated with standing up a full JIOTF are not feasible and probably unattainable. A more feasible solution would be to activate an OPT comprised initially of the unified command's J-39 staff with augmentees from the JIOC. To ensure unity of effort across the geographic AOR, the IO OPT should be commanded by the combatant command J-39.

At the combatant command level, the question is NOT one of responsiveness of IO, but of the theater commander and his planning efforts overall. Deliberate planning, crisis action planning, and the newly directed Standing Joint Force Headquarters all enhance the ability to begin IO planning at the combatant command level early in the conflict. Once a JTF is stood up, its emphasis should initially be on IO and then shift, as necessary, to other options (kinetics). At the operational level, this gets the JTF up and running early with minimal assets but a clear IO focus prior to significant assets arriving in the JOA.

*Align the IO cell by functions* – Once the IO cell is activated, how should it be internally organized? The only guidance for forming an IO organization within a JTF is outlined in JP 3-13.<sup>49</sup> What is lacking is an internal organizational structure of the IO cell designed to better integrate, coordinate, deconflict, and synchronize IO during contingency operations. The “roundtable” depiction of the IO cell in JP 3-13 (Appendix B) is more suited to the IOWG meeting in which you have loose, free-flowing discussions of IO activities and capabilities. Instead, the IO cell should be more structured. I recommend organizing the JTF IO cell by functions. Appendix D offers a graphical layout of this proposed internal IO organization. Without eliminating any of the participants of the doctrinal IO cell, the layout assigns each of the IO capabilities and related activities to one of four functions – Influence Operations, Physical Attack Operations, Network Operations, and Support.<sup>50</sup>

The **influence operations team** is designed to manage friendly and adversary perceptions of events in such a way as to support the JFC’s concept of operations.<sup>51</sup> This team targets audiences among adversaries, potential adversaries, U.S. audiences, and audiences from friendly nations. They anticipate events based on information from intelligence support and operations planners. This team’s main focus should be proactive in order to win support from home and friendly nations. Perception management “damage control” will also play an important role; during OAF, the NATO PA team appeared unprepared and clumsy when attempting to answer the media’s questions on collateral damage, particularly when a NATO aircraft inadvertently attacked a convoy of refugees (5 days to respond) and in the wake of the bombing of the Chinese embassy (3 days to respond).<sup>52</sup>

The information environment cannot be fully controlled or information superiority achieved without proper emphasis on perception management. Credibility is the key to successful perception management and image projection. Influence operations must include an understanding of what motivates people and an ability to manage the messages we send them. Influence operations can provide our adversaries with ideas that predispose them to take actions beneficial to us or, over the long term, erode their will to oppose us. Conversely, our adversaries may strive to achieve these same effects on us, and we must be capable of protecting ourselves from being influenced.

The **physical attack team** is chartered to identify target sets that support the JFC's IO concept of operations. This team works closely with the Joint Targeting Coordination Board – during COBRA GOLD 03, a close working relationship between the IO staff and the targeting board had synergistic effects on the IO battle plan.<sup>53</sup> OIF saw similar results. Major General LeBras, Commander of the AIA and JIOC, explains that during OIF, “we used all of those [direct bombing of facilities and disrupting communications through EW] in combination and basically neutralized the Iraqi integrated air defense system without the need to destroy very much of it.”<sup>54</sup> See Appendix C for a list of physical attack targets during OIF.

The **network operations team** will provide both offensive and defensive computer network planning support to the IO cell. Such planning came to fruition for the first time in history when on 9 January 2003, the OIF coalition initiated an electronic mail campaign directly targeting Iraq's regime leadership.<sup>55</sup> The team's emphasis will be on deconfliction and integration of planned CNA action with other IO elements of the operation. This team must be able to draw upon the unique capabilities of other coalition military organizations

and governments or the insights of non-government agencies. Therefore, an important responsibility of this team is to coordinate CNO with higher headquarters (e.g. USSTRATCOM) for approval and execution. USSTRATCOM's JFHQ-IO should provide expertise in order to facilitate this interagency coordination. However, doing so has proven to be difficult.<sup>56</sup>

The **support team** includes both OPSEC and intelligence. The key to a successful IO effort hinges on the intelligence team. This team will provide intelligence on adversary critical vulnerabilities that may be exploited by IO, including enemy IO capabilities and information systems, processes, and decision makers. This team also considers the effect of the media and the attitudes, culture, economy, demographics, politics, and personalities of people in the JOA – identifying key political, economic and social factors that created the environment as well as the individuals, organizations and groups functioning in and impacting on the environment. Historically, integration of intelligence and IO has been weak. During OAF and STEEL PUMA 2000, outside intelligence support to the IO organization was considered inadequate.<sup>57</sup> Moving a small intelligence support cell directly into the IO organization will allow for a more synergistic intelligence/targeting effort.

A potential drawback to the “functional” organizational structure is that it stove-pipes IO capabilities within the IO cell. This appears to make the integration, coordination, and synchronization of IO within the JTF more difficult. In fact, this “functionally aligned” organization along with the IOWG creates a more streamlined methodology that enhances the IO officer's ability to pull together the efforts of all the different disciplines within the IO cell. The most important aspect of this organization and its methodology is that it enables IO to proactively meet the needs of the JFC during the execution of a contingency operation.

Since IO spans all theaters of war and the entire spectrum of conflict from peace to conflict to war and back to peace, the IO organization must be structured accordingly.

## CONCLUSION

*“The real target in war is the mind of the enemy commander, not the bodies of his troops.”*  
*Capt Sir Basil Liddell Hart<sup>58</sup>*

Within the last 10 years, we have experienced an explosion of change within the IO community. Not only is the utility of IO embraced within the individual services, but also for the first time, we have a unified command chartered with the responsibility of organizing and coordinating national-level IO for the regional combatant commands. These changes address the unity of command and unity of effort issues that motivate the notional concepts of the JFIOCC and JFIOTF, concepts since debunked by painful lessons learned.

Since IO is a strategy and not a force (a common misperception), an IO organization under J-3 offers the most effective way to integrate IO into the overall military plan. To plan and execute IO early, the combatant commander should stand up an OPT (comprised of theater IO planners from J-39 and JIOC) until the JTF is activated. The JTF should initially concentrate on shaping the battlespace through IO until sufficient forces are in theater.

Finally, joint IO doctrine fails to address how the IO cell should be internally organized. Lessons learned from OAF drive an IO cell organized functionally instead of the loose “round table” concept in Appendix B. Properly manned disciplines within the different functions of influence operations, physical attack operations, network operations, and support will allow the JFC to execute a timely, deconflicted, and synergistic IO combat plan.

## APPENDIX A

### DEFINITIONS

*“Information is the oxygen of the modern age. It seeps through the walls topped by barbed wire, it wafts across the electrified borders.”*

*Ronald Reagan*<sup>59</sup>

**PSYOP** – Planned operations to convey selected information and indicators to foreign audiences to influence their emotion, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of PSYOPs is to induce or reinforce foreign attitudes and behavior favorable to the originator’s objectives.<sup>60</sup> PSYOP can multiply the effects of deception, reinforce apparent perceptions, plant seeds of doubt about the enemy leadership, proliferate discreet messages to enemy C3 and intelligence collectors, and enhance and combine live-fire demonstrations with surrender appeals – all to magnify one’s superiority and to encourage the enemy to give up the fight.<sup>61</sup> A variety of actions are used, such as political and diplomatic communiqués, leaflet drops, loudspeaker broadcasts, and various other means of transmitting information. In addition, a strong psychological impact can be derived from various military activities in peacetime, such as moving large forces or holding large exercises or maneuvers.<sup>62</sup>

**OPSEC** – A process of identifying critical information and subsequently analyzing friendly actions attendant to military operations and other activities to: a. Identify those actions that can be observed by adversary intelligence systems. B. Determine indicators hostile intelligence systems might obtain that could be interpreted or pieced together to derive critical information in time to be useful to adversaries. C. Select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly action to adversary exploitation.<sup>63</sup> At the operational level, OPSEC is aimed at denying the

enemy's operational commander information on one's capabilities, intentions, and vulnerabilities.<sup>64</sup>

**EW** – Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. The three major subdivisions within EW are: electronic attack, electronic protection, and electronic warfare support.<sup>65</sup> EW is aimed at degrading the performance of the enemy's electronics and weapon systems, provide warning of enemy action, and locating and identifying enemy sensors, thereby reducing their effectiveness against one's forces.<sup>66</sup>

**MILDEC** – Those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react in a manner prejudicial to his interests.<sup>67</sup> The main objective of MILDEC, regardless of scale, is to surprise, maintain security, increase freedom of one's action, or mislead the enemy and induce him to act to his disadvantage and then exploit the situation for the advantage of one's forces.<sup>68</sup>

**CNA** – Operations to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves.<sup>69</sup>

**CA** – The activities of a commander that establish, maintain, influence, or exploit relations between military forces and civil authorities, both governmental and nongovernmental, and the civilian populace in a friendly, neutral, or hostile area of operations in order to facilitate military operations and consolidate operational objectives, Civil affairs may include performance by military forces of activities and functions normally the responsibility of local government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of

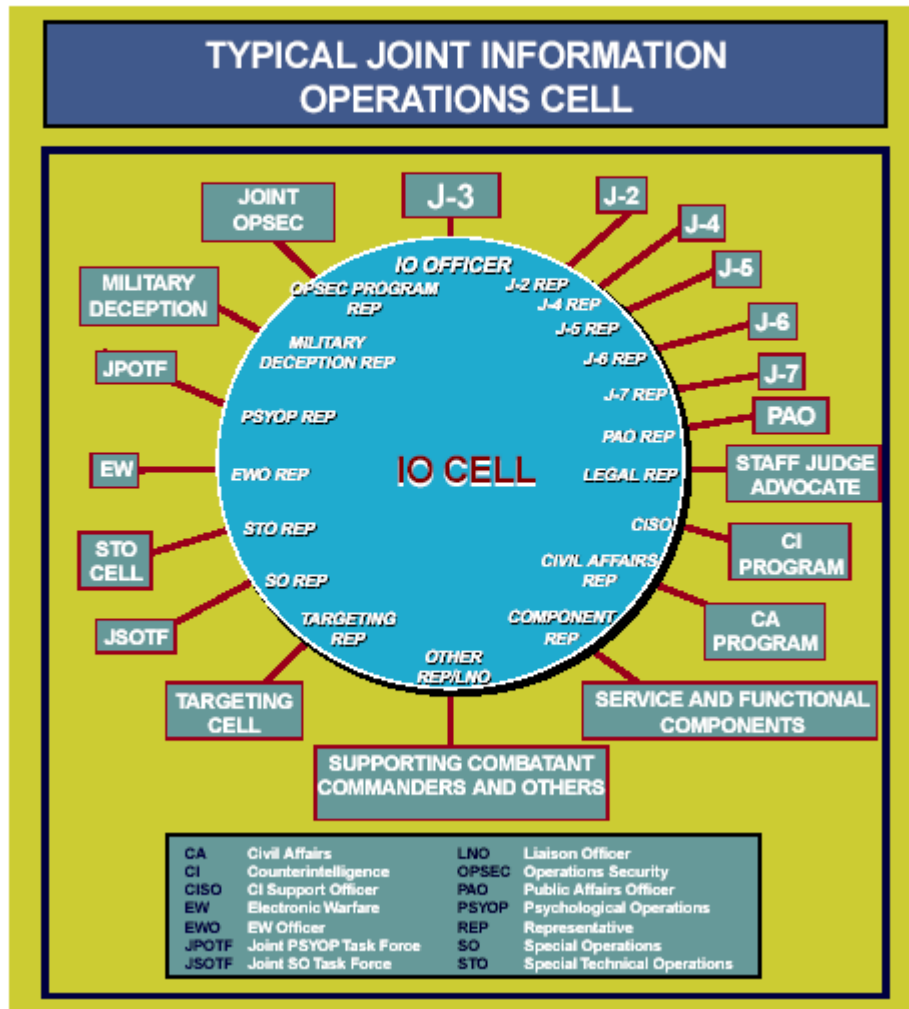
other military operations.<sup>70</sup> NATO CA efforts during OAF were responsible for the success of the massive humanitarian effort needed to deal with the Kosovar refugee crisis.<sup>71</sup>

**PA** – Those public information, command information, and community relations activities directed toward both the external and internal publics with interest in the Department of Defense.<sup>72</sup> External audiences include domestic and foreign publics with an interest in the military and internal audiences include soldiers, sailors, airmen, and Marines. The success of a PA operation depends significantly upon the ability to maintain absolute credibility.

## APPENDIX B

### INFORMATION OPERATIONS CELL

#### Information Operations Organization



## APPENDIX C

### IO DURING OPERATION IRAQI FREEDOM<sup>73</sup>

*Let me begin by saying this will be a campaign unlike any other in history<sup>74</sup>*

- General Tommy R. Franks

#### INFLUENCE OPERATIONS

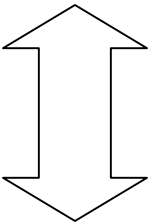
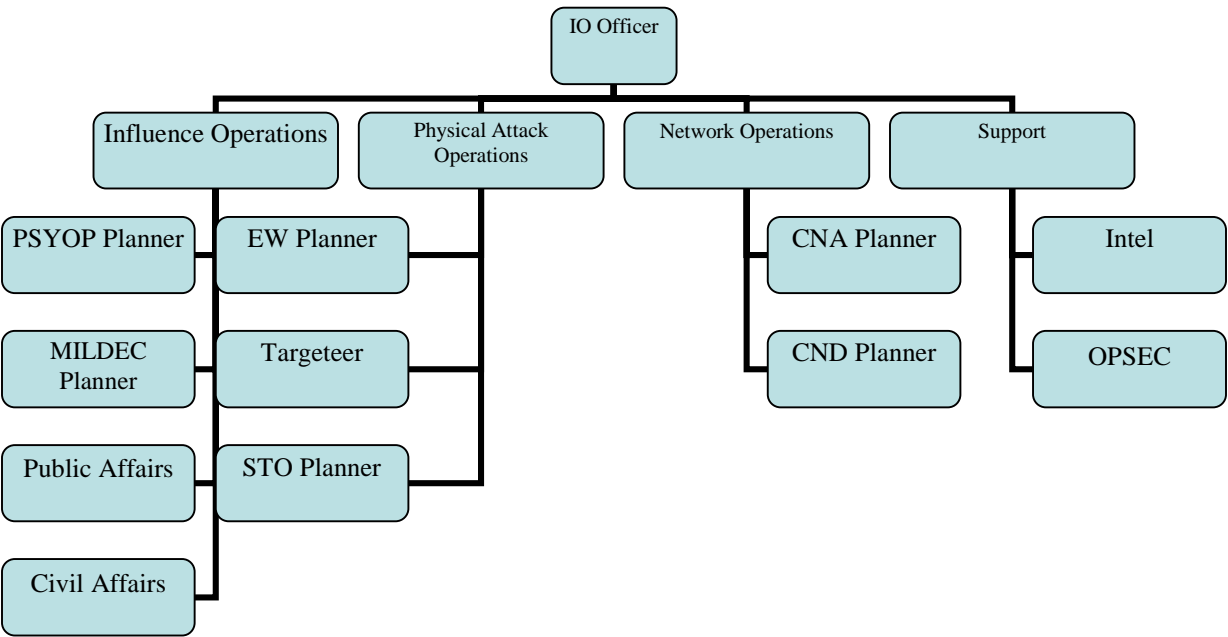
|  |            |
|--|------------|
| - Leaflets Dropped                                   | 31,800,000 |
| - Leaflet Missions                                   | 158        |
| A-10   | 32         |
| B-52   | 34         |
| F-18C  | 24         |
| F-16CJ   | 68         |
| - Commando Solo Sorties                              | 58         |
| Radio Broadcast Hours                                | 306        |
| TV Broadcast Hours                                   | 304        |
| - Compass Call Sorties                               | 125        |
| * Includes first-ever PSYOP from a Compass Call      |            |
| - Radio Messages Produced and Broadcast for OIF      | 108        |
| - Different Leaflet Messages Dropped by CFACC Assets | 81         |

#### PHYSICAL ATTACK OPERATIONS

|   |                       |
|---|-----------------------|
| - C4I targets which included IO media facilities      | 116                   |
| - Sorties against Iraqi integrated air defense system | 200/day <sup>75</sup> |

**APPENDIX D**

**PROPOSED IO ORGANIZATIONAL STRUCTURE**



| Liaison Elements / Unit Liaisons |                    |    |       |                       |        |
|----------------------------------|--------------------|----|-------|-----------------------|--------|
| Combatant CC's                   | JPOTF              |    | JSOTF |                       | CI SJA |
|                                  | J2                 | J4 | J5    | J6                    | J7     |
|                                  | Service Components |    |       | Functional Components |        |
|                                  | Interagency        |    |       | Contractors           |        |

## NOTES

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<sup>1</sup> John Shaw, "Does the JFC Need a JIOTF? Strengthening IO Doctrine," Cyber Sword, (Fall 1999): 4; Paul Bowman, "IO: Strategy or Mission? Reflections on Allied Force," Cyber Sword, (Fall 2001): 20.

<sup>2</sup> Anthony J. Clapp, "Information Operations and Joint Vision 2020: Ready To Accept the Challenge," (Unpublished Research Paper, U.S. Naval War College, Newport, RI: 4 February 2002); Lawrence W. McLaughlin, "Organizing for Information Operations Within The Joint Task Force," (Unpublished Research Paper, U.S. Naval War College, Newport, RI: 3 February 2003). Each paper advocates an IO officer should report directly to the Commander of the Joint Task Force. The thesis of this paper was drawn from faulty assumptions with their conclusions/recommendation sections.

<sup>3</sup> William B. Scott, "New Strategic Command Could Assume Broader Roles," Aviation Week & Space Technology, Vol. 157, Iss. 16 (14 October 2002): 63.

<sup>4</sup> Ronald R. Fogleman, "Information Operations: The Fifth Dimension of Warfare," Defense Issues, 10, no. 47 (1995): 1.

<sup>5</sup> Chairman of the Joint Chiefs of Staff, Joint Vision 2020, (Washington, DC: June 2000), 28.

<sup>6</sup> *Ibid.*, 30.

<sup>7</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, Joint Pub 3-13 (Washington, DC: 9 October 1998), II-4.

<sup>8</sup> Joint Chiefs of Staff, Joint Task Force Planning Guidance, Joint Pub 5-00.2 (Washington, DC: 13 January 1999), II-1.

<sup>9</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, V-1.

<sup>10</sup> President, Unified Command Plan, 10 January 2003.

<sup>11</sup> Scott.

<sup>12</sup> *Ibid.*

<sup>13</sup> U.S. Strategic Command, "USSTRATCOM Concept of Operations for Information Operations and Space Control," (2003).

<sup>14</sup> Richard B. Myers, "Shift to a Global Perspective," Naval War College Review, Vol LVI, Number 4 (Autumn 2003): 15.

<sup>15</sup> Carla D. Bass, "Building Castles on Sand: Underestimating the Tide of Information Operations," Airpower Journal, (Summer 1999): 36.

<sup>16</sup> "JIOC Organization," <<http://www.jioc.smil.mil/organization/overview.html>> [26 January 2004].

<sup>17</sup> HQ USAF PAD 02-04, "Air Combat Command Information Operations Integration," (1 June 2002): i.

<sup>18</sup> "Information Operations – The Hard Reality of Soft Power," (Unpublished Paper, Joint Command Control & Information Warfare Staff, Joint Forces Staff College), 78.

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<sup>19</sup> Department of the Army, Information Operations: Doctrine, Tactics, Techniques, and Procedures, Field Manual 3-13 (Washington, DC: 21 October 02), 1-1.

<sup>20</sup> Richard Coronado, <[Richard.coronado@jioc.osis.gov](mailto:Richard.coronado@jioc.osis.gov)> "Request for Information" [E-mail to Gregory M. Patschke <[Gregory.patschke@nwc.navy.mil](mailto:Gregory.patschke@nwc.navy.mil)>] 30 January 2004.

<sup>21</sup> "Information Operations – The Hard Reality of Soft Power," 78.

<sup>22</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, V-1.

<sup>23</sup> Ibid., IV-1.

<sup>24</sup> Ibid., IV-2 – IV-3.

<sup>25</sup> Milan Vego, Operational Warfare (n.p.: n.p. n.d.), 101; Zachary P. Hubbard, "Information Operations and Information Warfare in Kosovo: A Report Card We Didn't Want to Bring Home," Cyber Sword, (Spring 2000): 28.

<sup>26</sup> Shaw.

<sup>27</sup> Bowman.

<sup>28</sup> Coronado.

<sup>29</sup> McLaughlin.

<sup>30</sup> Henry K. Howerton, JIOC, telephone conversation with author, 26 January 2004; Coronado; Jeffery S. Cole, <[Jeffrey.cole@pacom.smil.mil](mailto:Jeffrey.cole@pacom.smil.mil)> "IO Cell," [E-mail to Gregory M. Patschke <[Gregory.patschke@nwc.navy.smil.mil](mailto:Gregory.patschke@nwc.navy.smil.mil)>] 22 January 2004.

<sup>31</sup> Clapp; McLaughlin.

<sup>32</sup> Joint Chiefs of Staff, Unified Action Armed Forces (UNAAF), Joint Pub 0-2 (Washington, DC: 10 July 2002), V-4.

<sup>33</sup> Joint Chiefs of Staff, Doctrine for Joint Psychological Operations, Joint Pub 3-53 (Washington, DC: 10 July 1996), II-5-c.

<sup>34</sup> Shaw, 5.

<sup>35</sup> Dave Buchholz, "Further Evaluation of the JIOTF Organization Needed," JULLS Lessons Learned, 1 March 2000, <[http://www.jioc.smil.mil/julls/CF\\_progs/display\\_specific\\_details.cfm?jid=96](http://www.jioc.smil.mil/julls/CF_progs/display_specific_details.cfm?jid=96)> [19 December 2003].

<sup>36</sup> Bowman, 28.

<sup>37</sup> Department of Defense, Overt Psychological Operations Conducted by the Military Services in Peacetime and in Contingencies Short of Declared War, DoD S-3321.1. (Washington, DC: 26 July 1984), 4. Due to the sensitive nature of PSYOP, the JPOTF requires direct access to the JFC (the only approval authority for PSYOP messages).

<sup>38</sup> Howerton.

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<sup>39</sup> Jeffery D. Seinwill, "Organizing Joint Forces for Information Operations: The Viability of a Joint Force Information Operations Component Commander," (Unpublished Research Paper, U.S. Air War College, Montgomery, AL: April 1999).

<sup>40</sup> "AY 03-04 ISS/SSS Reindoctrination Read Ahead," HQ Air Force Doctrine Center CD-ROM, (July 2003).

<sup>41</sup> Ibid.

<sup>42</sup> Kernan Chaisson, "Wolfowitz Calls Information Operations Critical," Journal of Electronic Defense, 25 (April 2002): 15.

<sup>43</sup> Henry S. Kenyon, "Unconventional Information Operations Shorten Wars," Signal, 57 (August 2003): 33.

<sup>44</sup> Edmund P. Giambastiani, Jr., "Statement of Admiral Edmund P. Giambastiani, Jr., Allied Commander, United States Joint Forces Command and Supreme Allied Commander Transformation (NATO)," U.S. Congress, House, Committee on Armed Services, 108th Cong., 2 October 2003, 8.

<sup>45</sup> Coronado.

<sup>46</sup> Vego, 100.

<sup>47</sup> Paul Bowman, "JTF for IO: Making IO Continuous," Cyber Sword (2000): 27.

<sup>48</sup> Ibid.

<sup>49</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations. Throughout this publication are different attributes of an IO cell: "An IO cell is formed from select representatives from each staff element, component, and supporting agencies responsible for integrating capabilities and related activities. This cell merges capabilities and related activities into a synergistic plan. The cell coordinates staff elements and/or components represented in the IO cell to facilitate the detailed support necessary to plan and coordinate IO...The actual composition or members of the IO cell may vary based on the overall mission of the joint force, the role of IO in accomplishing the JFC's objectives, and the adversary's or potential adversary's capability to conduct IO...This provides the JFC with the capability to integrate, coordinate, and deconflict the full spectrum of IO."

<sup>50</sup> Lynn Hanson, "Organization of the Information Operations Cell for a Joint Task Force," Cyber Sword, (Spring 2000): 29; Glaze, "Information Operations Warfighting Integration," Unclassified Briefing, HQ USAF/XOIW: March 2003. This concept was a merger of ideas. The perception management and physical effects teams were from Lynn Hanson. The Network Operations team was from Col Glaze.

<sup>51</sup> Hansen, 30.

<sup>52</sup> Hubbard, 28.

<sup>53</sup> Landon Hutchens, "Coordination with IO Working Group," JULLS Lessons Learned, 15 May 2003, <[http://www.jioc.smil.mil/julls/CF\\_progs/display\\_specific\\_details.cfm?jid=475](http://www.jioc.smil.mil/julls/CF_progs/display_specific_details.cfm?jid=475)> [19 December 2003].

<sup>54</sup> Kenyon.

<sup>55</sup> "U.S. E-Mail Attack Targets Key Iraqis," CNN Interactive, 13 Jan 03; "Babil Reports Start of U.S. 'E-mail Campaign' Targeting Senior Iraqi Officials," Baghdad Babil [FBI's translation], 12 Jan 03.

<sup>56</sup> Cole.

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<sup>57</sup> Michael Catlin, "Joint Information Operations Task Force Staff," JULLS Lessons Learned, 1 March 2000, <[http://www.jioc.smil.mil/julls/CF\\_progs/display\\_specific\\_details.cfm?jid-93](http://www.jioc.smil.mil/julls/CF_progs/display_specific_details.cfm?jid-93)> [19 December 2003]; Bowman, 20.

<sup>58</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, II-4.

<sup>59</sup> Glenn A. Tolle, "Shaping the Information Environment," Military Review, 82 (May/June 2002): 47.

<sup>60</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-10.

<sup>61</sup> Vego, 222.

<sup>62</sup> Joint Chiefs of Staff, Joint Doctrine for Command and Control Warfare, Joint Pub 3-13.1 (Washington, DC: 7 February 1996), II-3.

<sup>63</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-9.

<sup>64</sup> Vego, 223.

<sup>65</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-6.

<sup>66</sup> Vego, 224.

<sup>67</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-8.

<sup>68</sup> Vego, 223.

<sup>69</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-5.

<sup>70</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-4.

<sup>71</sup> Hubbard, 28.

<sup>72</sup> Joint Chiefs of Staff, Joint Doctrine for Information Operations, GL-10.

<sup>73</sup> Michael Mosely, "Operations Iraqi Freedom – By The Numbers," (30 April 2003).

<sup>74</sup> Peter Boyer, "The New War Machine," The New Yorker, (30 June 2003): 54.

<sup>75</sup> David A. Fulghum, "Fast Forward," Aviation Week & Space Technology, (28 April 2003): 34-35.

## BIBLIOGRAPHY

- “AY 03-04 ISS/SSS Reindoctrination Read Ahead.” HQ Air Force Doctrine Center CD-ROM. (July 2003).
- Bass, Carla D. “Building Castles on Sand: Underestimating the Tide of Information Operations.” Airpower Journal (Summer 1999): 36.
- Bowman, Paul. “Information Operations: Strategy or Mission? Reflections on Allied Force.” Cyber Sword (2001): 18-21.
- \_\_\_\_\_. “JTF for IO: Making IO Continuous.” Cyber Sword (2000): 27-28.
- Buchholz, Dave. “Further Evaluation of the JIOTF Organization Needed.” JULLS Lessons Learned. 1 March 2000.  
<[http://www.jioc.smil.mil/julls/CF\\_progs/display\\_specific\\_details.dfm?jid=96](http://www.jioc.smil.mil/julls/CF_progs/display_specific_details.dfm?jid=96)>  
[19 December 2003].
- Catlin, Michael. “Joint Information Operations Task Force Staff.” JULLS Lessons Learned. 1 March 2000.  
<[http://www.jioc.smil.mil/julls/CF\\_progs/display\\_specific\\_details.cfm?jid=93](http://www.jioc.smil.mil/julls/CF_progs/display_specific_details.cfm?jid=93)>  
[19 December 2003].
- Chairman of the Joint Chiefs of Staff. Joint Vision 2020. Washington, DC: June 2000.
- Chaisson, Kernan. “Wolfowitz Calls Information Operations Critical.” Journal of Electronic Defense (April 2002): 15.
- Clapp, Anthony J. “Information Operations and Joint Vision 2020: Ready to Accept the Challenge.” Unpublished Research Paper, U.S. Naval War College, Newport, RI: 4 February 2002.
- Cole, Jeffery S. <[Jeffrey.cole@pacom.smil.mil](mailto:Jeffrey.cole@pacom.smil.mil)> “IO Cell.” [E-mail to Gregory M. Patschke <[Gregory.patschke@nwc.navy.smil.mil](mailto:Gregory.patschke@nwc.navy.smil.mil)> 22 January 2004.
- Coronado, Richard. <[Richard.coronado@jioc.osis.gov](mailto:Richard.coronado@jioc.osis.gov)> “Request for Information.” [E-mail to Gregory M. Patschke <[Gregory.patschke@nwc.navy.mil](mailto:Gregory.patschke@nwc.navy.mil)>] 30 January 2004.
- Fogleman, Ronald R. “Information Operations: The Fifth Dimension of Warfare.” Defense Issues, 10, no. 47 (1995): 1-3.
- Fulghum, David A. “Fast Forward.” Aviation Week & Space Technology (28 April 2003): 34-35.
- Glaze. “Information Operations Warfighting Integration.” Unclassified Briefing. HQ USAF/XOIW: March 2003.

Hanson, Lynn. "Organization of the Information Operations Cell for a Joint Task Force." Cyber Sword (2000): 29-31.

Howerton, Henry K. Joint Information Operations Center. Telephone conversation with author, 26 January 2004.

HQ USAF. "Air Combat Command Information Operations Integration." HQ USAF PAD 02-04 (1 June 2002): i.

Hubbard, Zachary P. "Information Operations and Information Warfare in Kosovo: A Report Card We Didn't Want To Bring Home." Cyber Sword (Spring 2000): 28.

Hutchens, Landon. "Coordination with IO Working Group." JULLS Lessons Learned. 15 May 2003.  
<[http://www.jioc.smil.mil/julls/CF\\_progs/display\\_specific\\_details.dfm?jid=475](http://www.jioc.smil.mil/julls/CF_progs/display_specific_details.dfm?jid=475)>  
[19 December 2003].

"Information Operations: The Hard Reality of Soft Power." Unpublished Paper. Joint Command Control & Information Warfare Staff at the Joint Forces Staff College.

"JIOC Organization." <<http://www.jioc.smil.mil/organization/overview.html>>  
[26 January 2004].

Kenyon, Henry S. "Unconventional Information Operations Shorten Wars." Signal, 57 (August 2003): 33.

McLaughlin, Lawrence W. "Organizing for Information Operations within the Joint Task Force." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 3 February 2003.

Mosely, Michael. "Operation Iraqi Freedom – By the Numbers." (30 April 2003).

Myers, Richard B. "Shift To A Global Perspective." Naval War College Review (Autumn 2003): 15.

Scott, William B. "New Strategic Command Could Assume Broader Roles." Aviation Week & Space Technology (14 October 2002): 63.

Seinwill, Jeffery D. "Organizing Joint Forces for Information Operations: The Viability of a Joint Force Information Operations Component Commander." Unpublished Research Paper, U.S. Air War College, Montgomery, AL: 1999.

Shaw, John. "Does the JFC Need a JIOTF? Strengthening IO Doctrine." Cyber Sword (Fall 1999): 4-6.

Tolle, Glenn A. "Shaping the Information Environment." Military Review (May/June 2002): 47.

U.S. Congress. House. Committee on Armed Services. "Statement of Admiral Edmund P. Giambastiani, Jr., Allied Commander, United States Joint Forces Command and Supreme Allied Commander Transformation (NATO)." 108th Cong, 2 October 2003.

U.S. Department of Defense. Overt Psychological Operations Conducted by the Military Services in Peacetime and in Contingencies Short of Declared War. DoD S-3321.1. Washington, DC: 26 July 1984.

U.S. Department of the Army. Information Operations: Doctrine, Tactics, Techniques, and Procedures. Field Manual 3-13. Washington, DC: 21 October 2002.

U.S. Joint Chiefs of Staff. Doctrine for Joint Psychological Operations. Joint Pub 3-53. Washington, DC: 10 July 1996.

\_\_\_\_\_. Joint Doctrine for Command and Control Warfare. Joint Pub 3-13.1. Washington DC: 7 February 1996.

\_\_\_\_\_. Joint Doctrine for Information Operations. Joint Pub 3-13. Washington DC: 9 October 1998.

\_\_\_\_\_. Joint Task Force Planning Guidance and Procedures. Joint Pub 5-00.2. Washington DC: 13 January 1999.

\_\_\_\_\_. Unified Action Armed Forces (UNAAF). Joint Pub 0-2. Washington, DC: 10 July 2002.

U.S. President. Unified Command Plan – Change 2 (10 January 2003).

U.S. Strategic Command. "USSTRATCOM Concept of Operations for Information Operations and Space Control." (2003).

Vego, Milan. Operational Warfare. n.p.: n.p., n.d.